

File 348: European Patents 1983-2000/Sep W02

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File 349: PCT Fulltext 1983-2000/UB=20000914, UT=20000831

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1ALOG  
9/18/00

Set	Items	Description
S1	32	(MATCH? OR COMPAR? OR CONTRAST?) (N10) ((BUY?(N3)SELL?)(N4- (ORDER?))
S2	15	S1 AND ALGORITHM?
S3	17121	(BUY? OR SELL? OR TRADE? OR TRADING? OR PURCHAS?) (N10) (S- ECURITY?(N2)INSTRUMENT? OR SECURITIES? OR STOCK? OR BOND? OR - CONTRACT? OR COMMODITIE? OR INVESTMENT?(N2)INSTRUMENT? OR PRO- DUCT?)
S4	640	(CONDITIONAL? OR QUALIFYING? OR CONTINGEN?) (N4) (FACTOR? - OR ORDER? OR TRANSACTION? OR PURCHAS?)
S5	599	(PRICE? OR COST? ? OR FEE? ?) (N5) (ALGORITHM?)
S6	15	S2 AND S3
S7	34	S3(S)S4
S8	0	S7 (S)S5
S9	0	S7 AND S5
S10	0	S7 (N25) (ALGORITHM?)
S11	12	S2(N50)S3
S12	352	S3 (N5) (MATCH? OR COMPAR? OR CONTRAST?)
S13	0	S12 (S) S4
S14	3	S12 (S) ALGORITHM?
S15	14	S12 AND S4
?		

all considered

PCT  
and  
European  
Patents

## Best Available Copy

File 15:ABI/Inform(R) 1 -2000/Sep 18  
 (c) 2000 Bell & Howell  
 File 9:Business & Industry(R) Jul/1994-2000/Sep 15  
 (c) 2000 Resp. DB Svcs.  
 File 623:Business Week 1985-2000/Sep W1  
 (c) 2000 The McGraw-Hill Companies Inc  
 File 810:Business Wire 1986-1999/Feb 28  
 (c) 1999 Business Wire  
 File 275:Gale Group Computer DB(TM) 1983-2000/Sep 18  
 (c) 2000 The Gale Group  
 File 624:McGraw-Hill Publications 1985-2000/Sep 14  
 (c) 2000 McGraw-Hill Co. Inc  
 File 813:PR Newswire 1987-1999/Apr 30  
 (c) 1999 PR Newswire Association Inc  
 File 636:Gale Group Newsletter DB(TM) 1987-2000/Sep 18  
 (c) 2000 The Gale Group  
 File 621:Gale Group New Prod. Annou. (R) 1985-2000/Sep 18  
 (c) 2000 The Gale Group  
 File 16:Gale Group PROMT(R) 1990-2000/Sep 18  
 (c) 2000 The Gale Group  
 File 160:Gale Group PROMT(R) 1972-1989  
 (c) 1999 The Gale Group  
 File 148:Gale Group Trade & Industry DB 1976-2000/Sep 18  
 (c) 2000 The Gale Group  
 File 20:World Reporter 1997-2000/Sep 18  
 (c) 2000 The Dialog Corporation plc

DIALOG

9/18/00

Set	Items	Description
S1	1054	(MATCH? OR COMPAR? OR CONTRAST?) (N10) ((BUY?(N3)SELL?)(N4- (ORDER?))
S2	49	S1 AND ALGORITHM?
S3	3802259	(BUY? OR SELL? OR TRADE? OR TRADING? OR PURCHAS?) (N10) (S- ECURITY?(N2)INSTRUMENT? OR SECURITIES? OR STOCK? OR BOND? OR - CONTRACT? OR COMMODITIE? OR INVESTMENT?(N2)INSTRUMENT? OR PRO- DUCT?)
S4	21612	(CONDITIONAL? OR QUALIFYING? OR CONTINGEN?) (N4) (FACTOR? - OR ORDER? OR TRANSACTION? OR PURCHAS?)
S5	2978	(PRICE? OR COST? ? OR FEE? ?) (N5) (ALGORITHM?)
S6	49	S2 AND S3
S7	1	S2 AND S4
S8	585	S3 AND S5
S9	86	S3(S)S5
S10	1	S6 AND S4
S11	40	S6 NOT PY=2000
S12	25	RD (unique items)
S13	85	S9 NOT S6
S14	72	S13 NOT PY=2000
S15	47	RD (unique items)
?		

(all considered)

Full.  
text  
files

10/3,K/1 (Item 1 from file: 148)  
DIALOG(R)File 148:Gale Gr Trade & Industry DB  
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06726435 SUPPLIER NUMBER: 14568623 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Market integration and price execution for NYSE-listed securities. (New York Stock Exchange) (includes appendices)**

Lee, Charles M.C.

Journal of Finance, v48, n3, p1009(30)

July, 1993

ISSN: 0022-1082

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 10411

LINE COUNT: 00820

...ABSTRACT: orders differs systematically by location. In general, executions at the Cincinnati, Midwest, and New York stock exchanges are most favorable to trade initiators, while executions at the National Association of Security Dealers (NASD) are least favorable. These...

... Brokerage fees stir debate on IN THE EMERGING GLOBAL economy, the same security is often traded simultaneously at different physical locations. For such securities, market integration--the full and timely communication of intermarket information--is an issue of practical, academic, and regulatory importance.(1) In a fully integrated market, incoming buy (or sell) orders have an opportunity to be matched against the best available sell (or buy) orders across all locations. This intermarket matching process lowers the cost and time delay of trading and enhances the market's price...

...closely related issues of market integration and price execution for a sample of New York Stock Exchange (NYSE) listed securities. Most NYSE-listed securities also trade on at least one of five regional exchanges and in the Over-The-Counter (OTC...

...main proposition of this study is that the location of execution is price relevant for trades in NYSE-listed securities. The issue is timely, pertaining to the current regulatory debate surrounding payments for order flows...

...second test classifies all trades as buys or sells using the Lee and Ready (1991) algorithm and compares the trade price of off-Board buys (or sells) to adjacent NYSE buys...Consequently, the results pertain to execution costs for market orders, not limit or other price-contingent orders (unless these orders are executable upon receipt).(6) Further, trades that are not initiated by public orders (e...e., "cream skimming"). Unlike NYSE specialists, who must make a market for all NYSE-listed stocks, purchasers of order flows can target the more profitable "low end" business, which consists mainly of small trades in more liquid stocks. The NYSE specialist, finding profit margins reduced, may look to recover these losses by increasing...

...In fact, most regional exchanges as well as some NASD dealers have developed their own algorithms to improve the likelihood of inside-the-spread executions. The relative effectiveness of these algorithms in reducing execution costs for public market orders is an open empirical issue.

Few prior...is related to execution costs, this sample should represent the total population of NYSE-listed securities. Table I reports the distribution of trades for the 500 sample firms in each year. Just over 7.3 million trades were...

...example, in 1988 trades of 900 shares or less (a rough proxy for individual investor trades) represent over 75 percent of all transactions in NYSE-listed securities on the Boston, Midwest, Pacific, and Philadelphia exchanges, as well as the NASD. On the...

...reasons. First, if regional dealers "skim the cream" by making markets only in more liquid stocks, regional trades should have a lower average liquidity premium than NYSE trades. Thus, lower execution costs may, in fact, be a product of the stock selection procedure followed by regional

dealers. Second, quoted and effective spreads are...executed, the NASD performance should improve under these tests.

Lee and Ready (1991) propose an algorithm that classifies each trade as buyer or seller initiated. This algorithm (summarized in Appendix B) relies on the prevailing bid and ask prices as well as the prior price changes ("tick tests") in classifying trades. In this study, the algorithm provides a direct way of comparing the price of buys (or sells) executed in a...

...trade prices on market buys and higher average trade prices on market sells. The same algorithm is applied to trades from all exchanges, so even though trade misclassifications may introduce noise...control for cross-sectional differences across the sample firms. The unit of analysis is individual trades, so that securities with greater volume receive greater proportional weight. This approach is reasonable given the research focus on price execution per trade. However, since the extent of off-Board trading varies widely across securities, the results may be due to a small proportion of the sample firms. To examine...

...execution and price performance of different market centers. The results show that for NYSE-listed securities the price obtained on similar adjacent trades can differ by location of execution. In particular, the results...probes the other for "hidden liquidity" not revealed in the intermarket quote. The price improvement algorithm recently implemented by a prominent NASD member firm, Madoff Investments, is a prime example of...time of receipt.

In addition, during 1990, the Midwest exchange introduced a new price improvement algorithm that offers a one-eighth improvement on all trades if its execution at the intermarket...

...instituted an automated execution system dubbed MISSION. For orders of 300 shares or greater, in stocks trading at one-fourth or more spread, MISSION adjusts the Madoff ITS bid or ask to...

#### ...Appendix B: Inferring Trade Direction

The direction of individual trades is inferred by the following algorithm developed in Lee and Ready (1991). The only modification is that Lee and Ready use...Madoff Investment's MISSION system, implemented in the latter part of 1990. These price improvement algorithms may improve NASD and regional test results for future studies using post-1989 data.

19 T4 is classified as a buy in the Lee and Ready (1991) algorithm because it is executed at the ask price. Note that it is also a buy...

12/3,K/1 (Item 1 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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01964810 47414462

A trading primer  
Pirrong, Craig  
Regulation v22n4 PP: 24-25 1999  
ISSN: 0147-0590 JRNL CODE: RGO  
WORD COUNT: 1094

ABSTRACT: A discussion of the ways in which stocks are traded in the US is presented. Methods discussed include floor trading, over-the-counter trading and...

TEXT: STOCKS ARE TRADED IN SEVERAL ways in U.S. markets. Some companies choose to list their stocks for trading on traditional exchanges. The New York Stock Exchange (NYSE) is the most important listing exchange, but listed stocks are also traded on the American Stock Exchange (AMEX) and regional exchanges in Chicago, Philadelphia, Boston, San Francisco, and Los Angeles. Regional exchanges trade stocks that are listed on other markets as well as their own listings. Stocks that are not listed on an exchange (including many technology stocks, such as Microsoft) are traded in the over-the-counter (OTC) market.

TRADING IN STOCKS

...to provide liquidity where it's most needed, Madden says. "go after the most thinly traded stocks. Then offer to cross orders much less frequently, say once a week. "This one is an incredibly efficient way to trade illiquid stocks," says Madden. "In waiting, we can get much more liquidity, and we have the ability...

...12,000 trades per day. Yet because Traversi's customers concentrate their investments in technology stocks, Traversi thinks an E\*Trade bulletin board could potentially attain match rates at unheard-of levels: 25% to 50%.

Traversi says there are 1,200 to 1,400 stocks that are very popular with his clients. He compares E\*Trade's situation to that of his previous employer, Montgomery Securities, which, due to similar sector concentrations, regularly hit an institutional crossing rate of 37% to...

...trading systems, though relatively easy to build, contain some glaring inefficiencies. "The whole electronic book algorithm has never worked," says Christopher Keith, former chief technology officer for the New York Stock...

...As a result, Wunsch is making an offer to discount brokerages: allow your investors to trade with institutions on the Arizona Stock Exchange. Investors with accounts at participating brokerages would use the Internet to input their orders...collection mechanism to an Internet auction that is very visible." After the market close, an algorithm will find the highest price that will clear all of the "matched" trades. The orders...

...far heard "nothing negative" about his plans for a crossing system.

Just after launching Wit-Trade, Klein, an ex-securities lawyer himself, was treated to a conference call with the SEC -- 11 lawyers strong. Ten... Nasdaq-listed stock has 10 market makers, according to the exchange, while the most heavily traded stocks have more than 60. Thinly traded issues, and market makers who support them, will be more dramatically affected.

Off the record...

12/3,K/12 (Item 1 from file: 810)  
DIALOG(R)File 810:Business Wire  
(c) 1999 Business Wire. All rts. reserv.

0896260 BW1247

STATE STREET BSE: State Street and the Boston Stock Exchange Announce  
Exclusive Agreement On State Street's Bond Connect in the United States

August 19, 1998

Byline: Business Editors

...securities, developed with partners  
Bridge Information Systems and Net Exchange and introduced in May  
1998.

Bond Connect - which matches buy and sell orders  
electronically,  
using a complex algorithm - addresses limitations in the traditional  
trading environment by offering investors the ability to formulate  
orders...

...specific point in time.

The BSE will be the exclusive U.S. exchange participant in Bond  
Connect, initially providing computer system administration for the  
electronic trading of U.S. Corporate Debt, U.S. Government Debt,  
Agencies, Mortgage-Backed Securities, and U...

17/3,K/1 (Item 1 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01253302 SUPPLIER NUMBER: 06915085 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**The house of games. (New York stock exchange) (includes related articles on  
program trading, lessons of October, three-minute NYSE event, high  
technology access, and specialist trading)**  
Kull, David; Keough, Lee  
Computer Decisions, v20, n8, p43(11)  
Aug, 1988  
ISSN: 0898-1825 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 4875 LINE COUNT: 00379

... the clearinghouse procedure, traders continuously enter orders,  
and, periodically, the computer generates a price that **matches** the  
greatest number of **buy** and **sell** orders. Those orders are then  
executed at the clearing price, as are all orders at better prices.

Some...would clear all securities in the market simultaneously. This  
would allow traders to enter sophisticated orders **contingent** on market  
conditions--for example, "if the price of Ford stock rises above \$40 and...

...19? Mendelson believes traders would not have been afraid to enter the  
market because their orders could have been made **contingent** on an  
optimal scenario. What actually happened, of course, was that a lack of  
information...

17/3,K/2 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
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01789547 Supplier Number: 42996517 (USE FORMAT 7 FOR FULLTEXT)  
**AUTOMATED TRADING: INSTINET'S OMS OFFERS A CONTINUOUS CROSS AT GRANTHAM  
MAYO**  
Investment Management Technology, v1, n17, pN/A  
May 15, 1992  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 979

... in test mode at several buy-side institutions, sources say.  
Systems like Morgan Stanley's **Matchplus** allow **buyers** and **sellers**  
to enter orders anonymously: these orders never appear on any  
screen--only the counterparties know when an order...

...index it is meant to follow.

Float On

Users of OMS can also place portfolio "**contingency**" orders  
--floating limit orders --that move with the market and take advantage of  
market fluctuations to automatically turn on...

17/3,K/3 (Item 1 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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10294466 SUPPLIER NUMBER: 20860264 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Static hedging of exotic options. (includes appendix)**  
Carr, Peter; Ellis, Katrina; Gupta, Vishal  
Journal of Finance, v53, n3, p1165(26)  
June, 1998  
ISSN: 0022-1082 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 9137 LINE COUNT: 00741

... continuously monitoring the underlying and trading with every  
significant price change, the hedger can place **contingent** **buy** and **sell**  
orders with start/stop prices at the barriers. Second, when compared

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File 77:Conference Paper Index 1973-2000/Jul  
(c) 2000 Cambridge Sci Abs  
File 35:Dissertation Abstracts Online 1861-2000/Jul  
(c) 2000 UMI  
File 583:Gale Group Globalbase(TM) 1986-2000/Sep 15  
(c) 2000 The Gale Group  
File 2:INSPEC 1969-2000/Sep W3  
(c) 2000 Institution of Electrical Engineers  
File 65:Inside Conferences 1993-2000/Sep W3  
(c) 2000 BLDSC all rts. reserv.  
File 233:Internet & Personal Comp. Abs. 1981-2000/Sep  
(c) 2000 Info. Today Inc.  
File 99:Wilson Appl. Sci & Tech Abs 1983-2000/Aug  
(c) 2000 The HW Wilson Co.

Set	Items	Description
S1	19	(MATCH? OR COMPAR? OR CONTRAST?) (N10) ((BUY?(N3)SELL?) (N4- ) (ORDER?))
S2	0	S1 AND ALGORITHM?
S3	74044	(BUY? OR SELL? OR TRADE? OR TRADING? OR PURCHAS?) (N10) (S- ECURITY?(N2)INSTRUMENT? OR SECURITIES? OR STOCK? OR BOND? OR - CONTRACT? OR COMMODITIE? OR INVESTMENT?(N2)INSTRUMENT? OR PRO- DUCT?)
S4	1290	(CONDITIONAL? OR QUALIFYING? OR CONTINGEN?) (N4) (FACTOR? - OR ORDER? OR TRANSACTION? OR PURCHAS?)
S5	5305	(PRICE? OR COST? ? OR FEE? ?) (N5) (ALGORITHM?)
S6	6	S4 AND (BUY?(N3)SELL?)
S7	16	S3 AND S5
S8	44	S3 AND S4
S9	0	S8 AND ALGORITHM?
S10	0	S8 AND S1
S11	6	RD S6 (unique items)
S12	16	RD S7 (unique items)
?		

(All Considered)

Bibliographic  
files

File 256:SoftBase:Reviews, Companies&Prods. 85-2000/Aug

(c)2000 Info.Sources Inc

File 278:Microcomputer Software Guide 2000/Sep

(c) 2000 Reed Elsevier Inc.

1/AL-09  
9/18/00

Set	Items	Description
S1	3	(MATCH? OR COMPAR? OR CONTRAST?) (N10) ((BUY?(N3)SELL?) (N4- ) (ORDER?))
S2	0	S1 AND ALGORITHM?
S3	2933	(BUY? OR SELL? OR TRADE? OR TRADING? OR PURCHAS?) (N10) (S- ECURITY?(N2)INSTRUMENT? OR SECURITIES? OR STOCK? OR BOND? OR - CONTRACT? OR COMMODITIE? OR INVESTMENT?(N2)INSTRUMENT? OR PRO- DUCT?)
S4	6	(CONDITIONAL? OR QUALIFYING? OR CONTINGEN?) (N4) (FACTOR? - OR ORDER? OR TRANSACTION? OR PURCHAS?)
S5	17	(PRICE? OR COST? ? OR FEE? ?) (N5) (ALGORITHM?)
S6	0	S3 AND (S4 OR S5)
S7	4	S4 AND (STOCK? OR PRODUCT? OR SECURITY?)
?		

( all considered )

Software  
file



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File 349:PCT Fulltext 1983-2000/UB=20000914, UT=20000831  
(c) 2000 WIPO/MicroPat

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S3	17121	(BUY? OR SELL? OR TRADE? OR TRADING? OR PURCHAS?) (N10) (S- ECURITY?(N2)INSTRUMENT? OR SECURITIES? OR STOCK? OR BOND? OR - CONTRACT? OR COMMODITIE? OR INVESTMENT?(N2)INSTRUMENT? OR PRO- DUCT?)
S4	640	(CONDITIONAL? OR QUALIFYING? OR CONTINGEN?) (N4) (FACTOR? - OR ORDER? OR TRANSACTION? OR PURCHAS?)
S5	599	(PRICE? OR COST? ? OR FEE? ?) (N5) (ALGORITHM?)
S6	15	S2 AND S3
S7	34	S3(S)S4
S8	0	S7 (S)S5
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S11	12	S2(N50)S3
S12	352	S3 (N5) (MATCH? OR COMPAR? OR CONTRAST?)
S13	0	S12 (S) S4
S14	3	S12 (S) ALGORITHM?
S15	14	S12 AND S4
?		

all considered

PCT  
and  
European  
Patents